

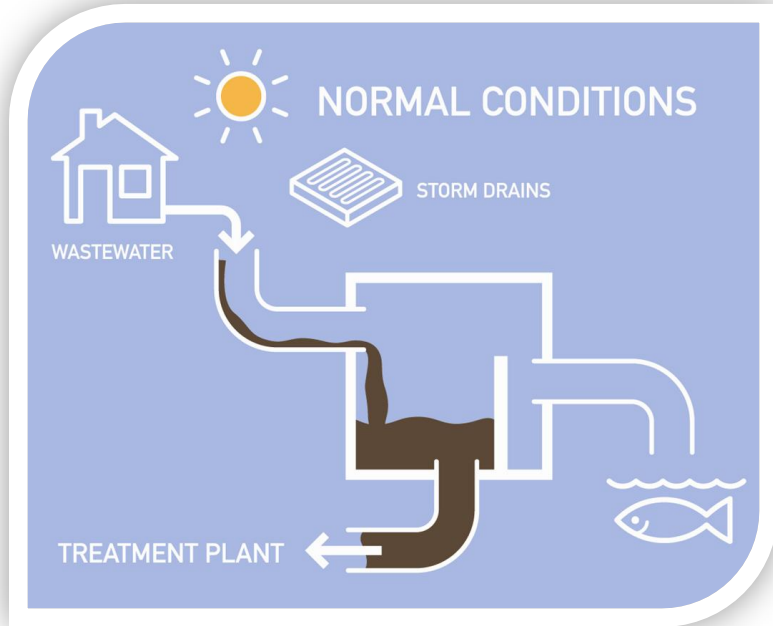
# **Genesee Area Combined Sewer Overflow Reduction Project**



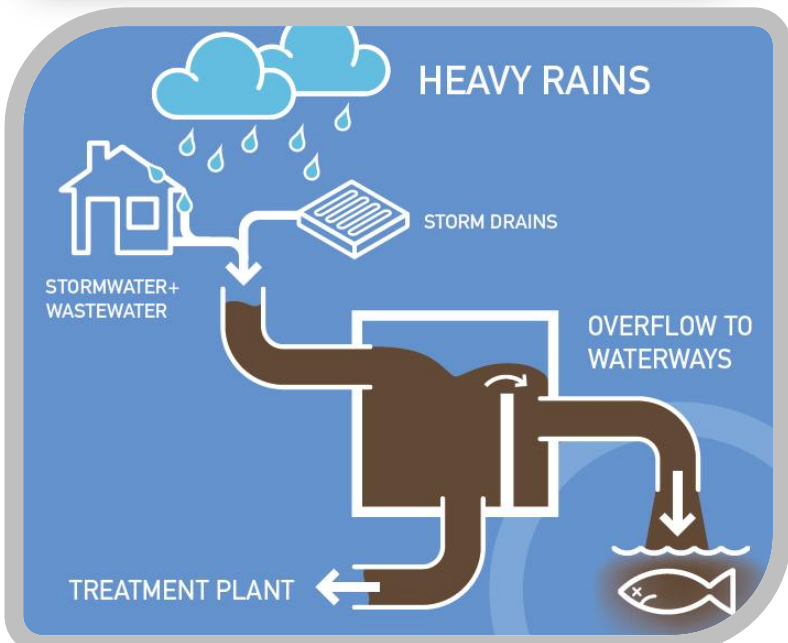
**Genesee Park  
Neighbors Association**

**August 26, 2010**

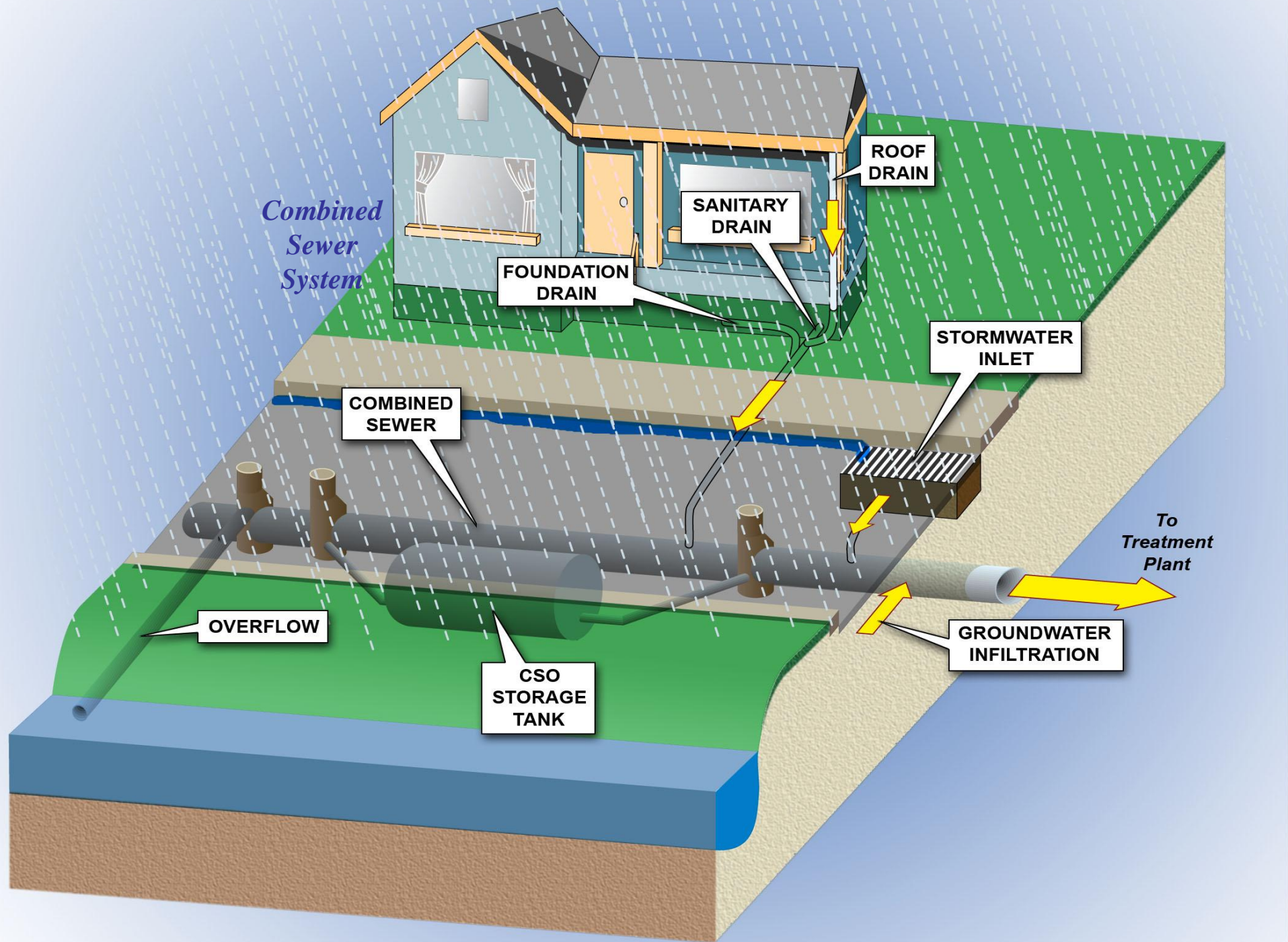
# What is a Combined Sewer Overflow?



💧 *Wastewater* (from homes) and *stormwater* (from rooftops, streets) flow in a single pipe - a “combined sewer.”



💧 During heavy rains, stormwater (~90%) and sewage (~10%) exceed the system, causing a combined sewer overflow (CSO) into nearest waterway.





# Combined Sewer Overflows (CSOs)

- 90 permitted CSO outfalls
- 100 million gallons CSO discharge annually
- About 200 CSO discharge events annually

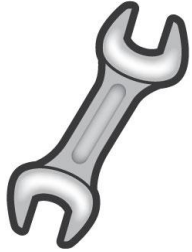


# CSO Reduction Program Goals

- 💧 Comply with Clean Water Act, state/federal regulations
- 💧 Improve water quality
- 💧 Finish historic effort
- 💧 Minimize rate impacts
- 💧 Partner for cost-effective solutions



# CSO Reduction Solutions



## Retrofits

Optimize  
and repair  
existing  
system.



## Green

Increase holding  
capacity of soil  
and slow the  
flow.



## Storage

Increase  
capacity of  
underground  
pipes and  
tanks.







# Green Stormwater Infrastructure (GSI)



- 💧 National leader in GSI
- 💧 Allows stormwater to slowly filter into ground, keeping it out of sewer system
- 💧 Incentives for property owners to install rain gardens & cisterns

[www.rainwise.seattle.gov](http://www.rainwise.seattle.gov)



# **Green Stormwater Infrastructure (GSI)**

## **Genesee Basin - Partially Separated**

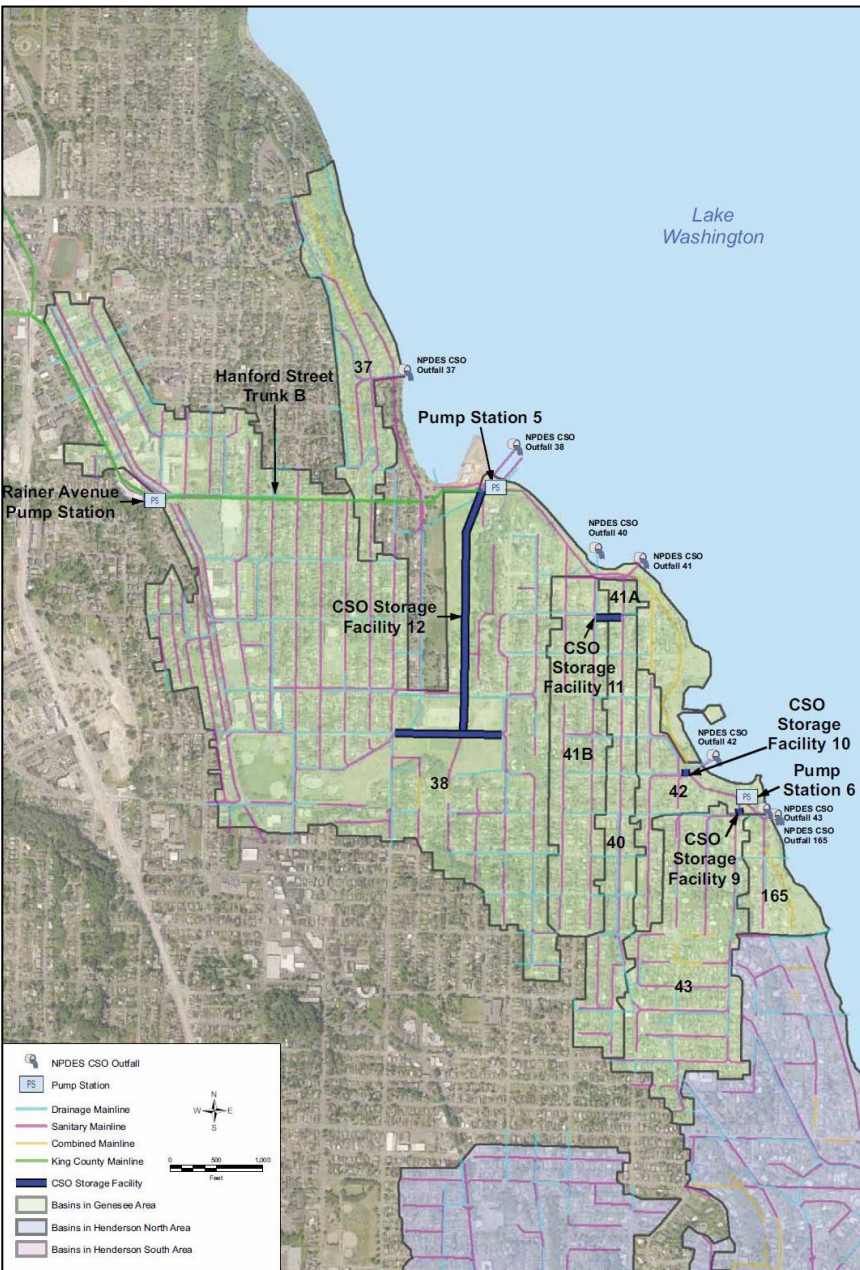
- **Street drains disconnected from combined system in 1970s**

 **Roadside rain gardens and green alleys not effective; street drains do not contribute to overflows, but roof drains on homes do contribute**

## **RainWise possible**

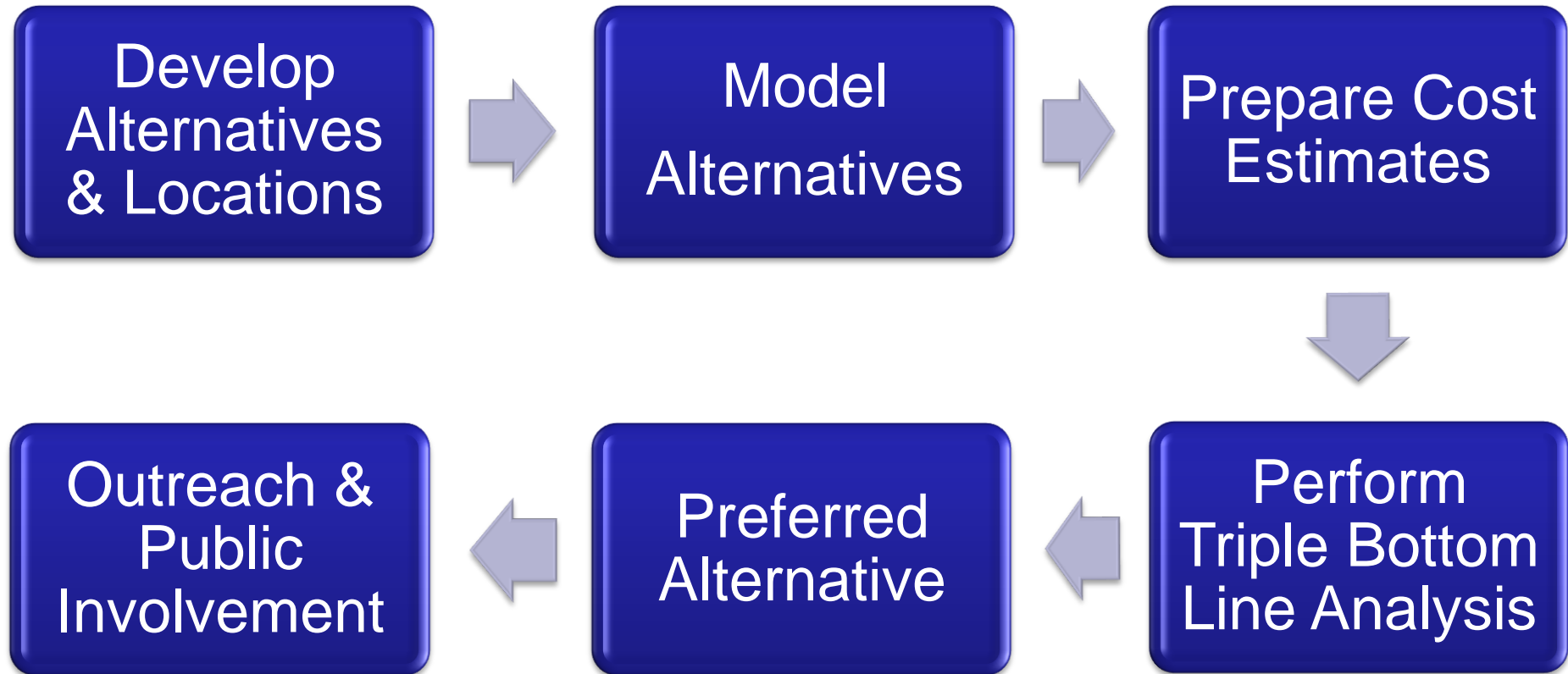
- **Rebates for homeowners to disconnect roof drains and channel stormwater to rain gardens or cisterns**

# Genesee CSO Reduction Project

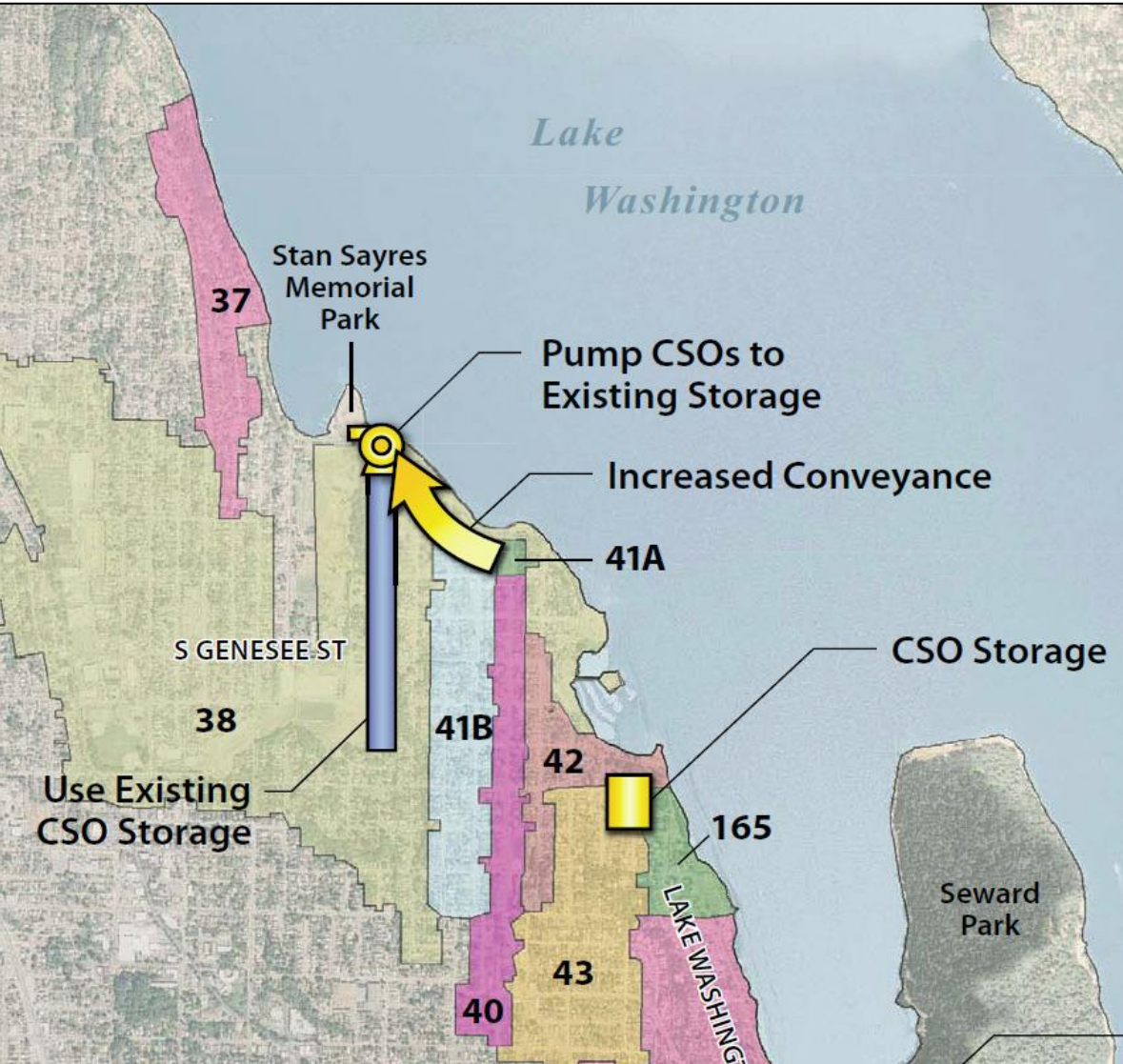


- 💧 Top Priority Basin
- 💧 700 Acres
- 💧 Construction 2013-2015
- 💧 Reduces CSOs from 10 times to 1 time per year
- 💧 Storage Volumes:
  - 💧 Basins 40/41: 430,000 gal
  - 💧 Basin 43: 190,000 gal

# Genesee CSO Reduction Screening Process



# Genesee Basin Alternative #1: Pipe, Pump and Store



## Includes:

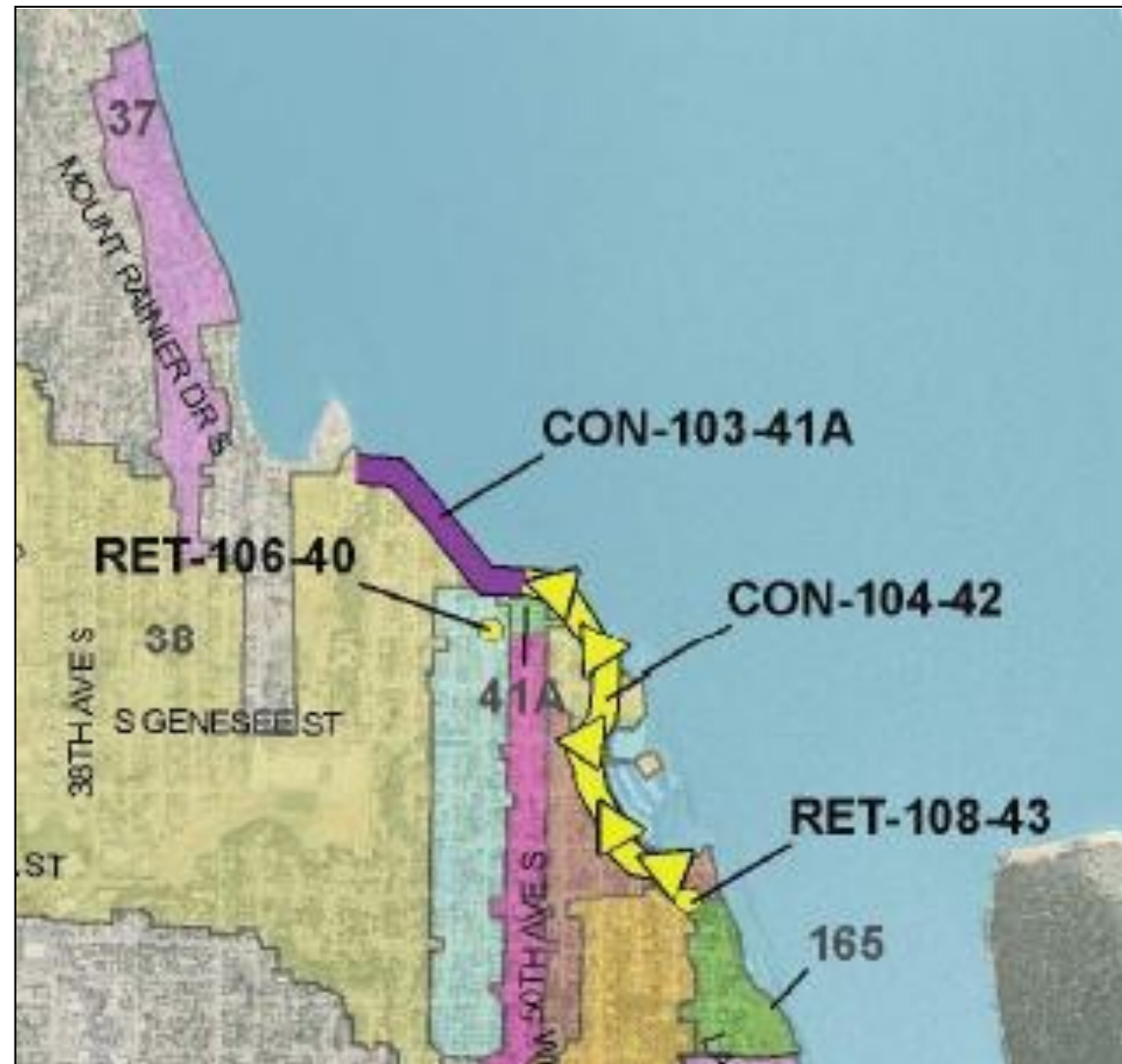
- Pipeline under Lake Washington Blvd
- New pump station near Stan Sayres Park
- Enlarging existing storage facility on S. Alaska St.



# Genesee Basin Alternative #2: Storage Under Street

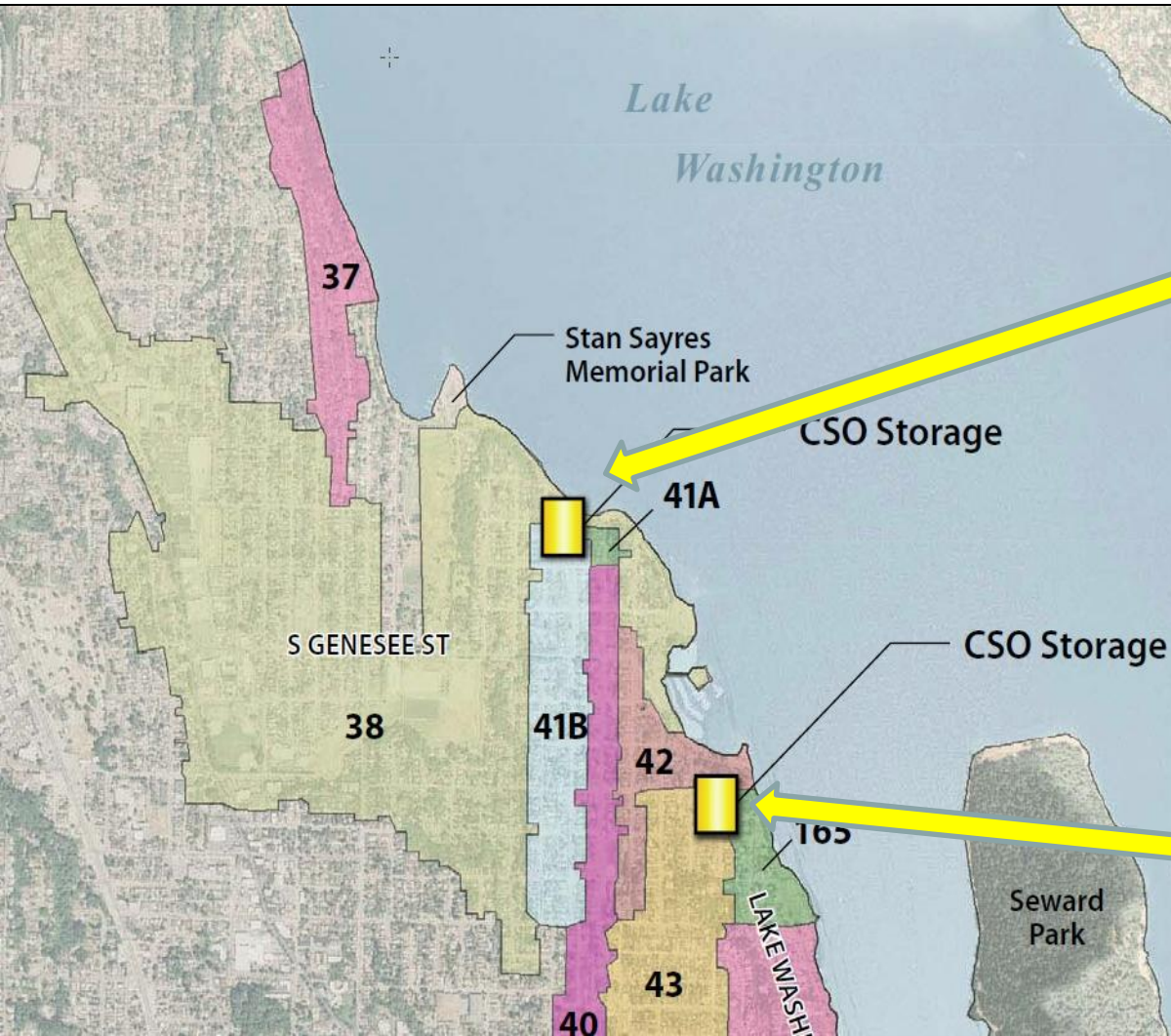
## Includes:

- Storage in-line with pipeline under Lake Washington Blvd
- Project would require 15-foot-wide excavation down middle of street



# Genesee Basin Alternative #3: Distributed Storage (Preferred)

a) Storage in Triangle Parking



b) Storage along S. Alaska St





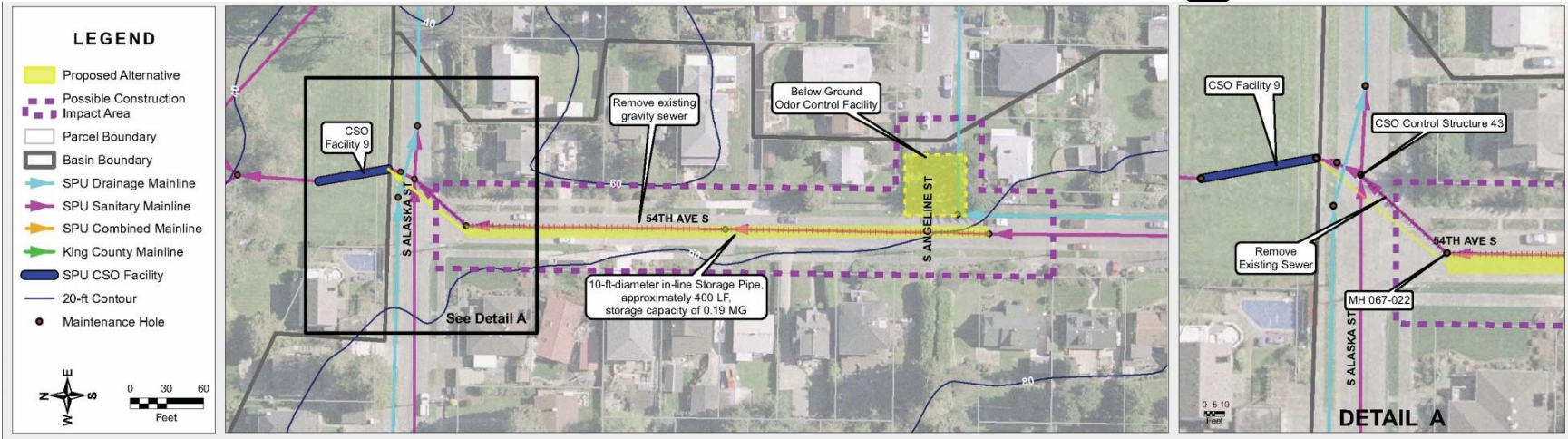
# Genesee Basin Alternative #3a: Distributed Storage (Preferred)



**Storage in Triangle Parking Lot**

Capacity: Approx. 430,000 gallons

# Genesee Basin Alternative for #3b: In-line Storage



## Add in line storage and odor control in 54<sup>th</sup> Ave.

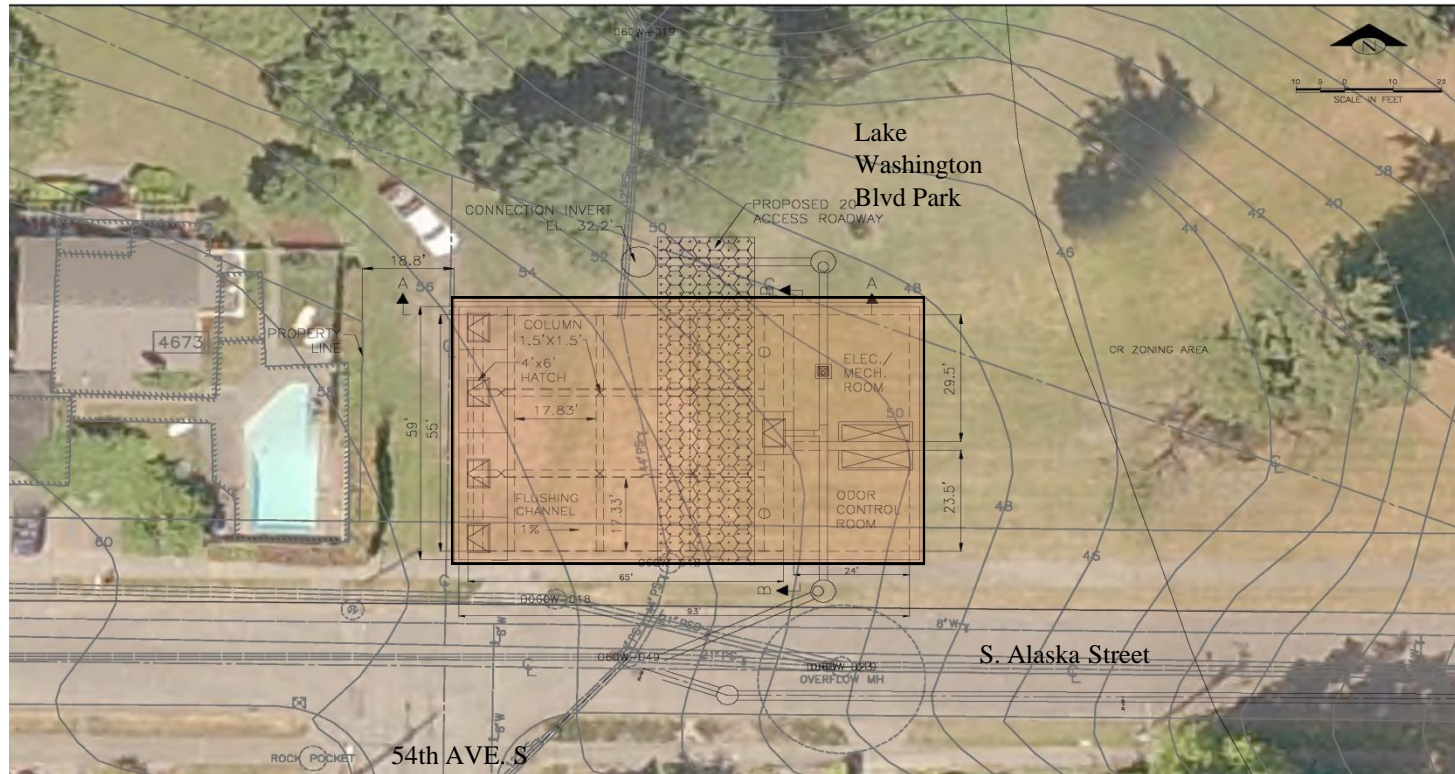
- Costly to construct
- Space constraints
- Street closed during construction/ significant impacts to residents



Looking south down 54th Ave S  
from S. Alaska Street



# Genesee Basin Alternative #3b: Distributed Storage (Preferred)



**Expand existing storage in Park near S. Alaska St.**  
Capacity: Approx. 250,000 gallons

# Common Concerns

- 💧 Traffic & Park Access
  - 💧 Workplace Expectations
  - 💧 Parking
  - 💧 Noise
  - 💧 Odors
  - 💧 Maintenance
  - 💧 Structural Integrity
  - 💧 Site Restoration
- 💧 Expectations around community events:
    - 💧 Seafair
    - 💧 Furry 5K
    - 💧 Bicycle Sundays
    - 💧 Live Strong Challenge
    - 💧 Danskin Triathlon
- Others?

# Traffic Requirements

- 💧 Minimize lane closures & impact
- 💧 Maximize # of traffic lanes open during peak hours
- 💧 Safe pedestrian & bicycle walkways
- 💧 Access for emergency vehicles
- 💧 Minimize construction impacts to traffic during peak hours



# Noise During Construction

- 💧 City of Seattle noise requirements for construction.
- 💧 Sounds created by construction are limited to:
  - 7 a.m. to 7 p.m. weekdays
  - 9 a.m. to 7 p.m. weekends and legal holidays
  - \*Exceptions granted under special conditions





# Workplace Expectations

- 💧 Respect for the community & neighbors
- 💧 Partner with the contractor for workplace expectations
- 💧 Public call line



# Odor Control During Operation

- 💧 Buried odor control in vaults
- 💧 Odor system operates year round
- 💧 Carbon-based air scrubber
- 💧 Vent designed to blend with other site features



# Maintenance Requirements

- 💧 Routine inspection (1 day/month)
- 💧 Event inspection (2-3 times/year)
- 💧 Regular equipment inspection – truck or van
- 💧 Cleaning (2-3 days every 1 to 5 years)
- 💧 Cleaning Equipment – vactor truck or crane





# Structural Integrity

- 💧 Earthquake design standards
- 💧 Structural inspection after an earthquake
- 💧 Tanks will fill a few times per year on average





# Project Progress

- 💧 Engineering Activities - ongoing
- 💧 Land surveying (*completed for Basin 40/41*)
- 💧 Preliminary geotechnical study (*completed*)
- 💧 Historical/cultural research (*completed*)
- 💧 Environmental review - underway
- 💧 Continued public outreach - ongoing



# Project Outreach

Presentations and briefings to community:

- ✓ **June 7** - Mt. Baker Community Club
- ✓ **June 23** - Southeast District Council
- ✓ **August 21** - On-site Question & Answer sessions
- ✓ **August 26** - Genesee Park Neighbors Association

# Upcoming Project Outreach

- ❖ **Sept. 14** – Lakewood/Seward Park Community Association  
At Lakewood Seward Park Community Club
- ❖ **Sept. 21** – Public Meeting  
6:00 – 8:00 p.m., Rainier Valley Cultural Center
- ❖ **Suggestions?**



# Contact Information

[SPU\\_GCSO@Seattle.gov](mailto:SPU_GCSO@Seattle.gov)

206-826-4767

[www.seattle.gov/CSO](http://www.seattle.gov/CSO)

If you would like to be included on the project email list – sign up in back, or send an email to [SPU\\_GCSO@Seattle.gov](mailto:SPU_GCSO@Seattle.gov) with "distribution list" in the subject line.